



What is claimed is:

1. (Amended) A loop-type reactor column comprising a reactor column housing, comprising a mixing chamber and an inlet in the area of the floor of the loop-type reactor column, and an outlet in the area of a head end of the loop-type reactor column for the material to be processed, comprising a stator and a rotor driven by a motor, whereby stator and rotor are mostly arranged in the portion of the mixing chamber facing the second head, stator and rotor each have at least one hollow cylinder provided with longitudinal slots, the hollow cylinders of the stator and the ones of the rotor are alternately interleaved and concentrically arranged, and the stator has a guide tube projecting into the mixing chamber, in which guide tube is arranged a conveyor worm, wherein the conveyor worm and the rotor are fastened on a common shaft driven by a motor, and wherein the shaft is guided through the second head of the loop-type reactor column and is rotatably supported in the head end and/or above the head end.

2. (Amended) The loop-type reactor column according to Claim 1, wherein the guide tube for the conveyor worm terminates in the area of the inlet.

3. The loop-type reactor column according to Claim 1, wherein the bearing of the shaft is sealed off in or on the head end remote from the hollow chambers in the reactor column housing, which hollow chambers house the material to be processed.

4. (Amended) The loop-type reactor column according to Claim 3, wherein the seal is a slide ring packing.

5. (Twice Amended) The loop-type reactor according to Claim 1, wherein the inlet, the guide tube, the rotor, and the stator, and also sheet-metal guides fastened on the stator are arranged centrally in the mixing chamber.